

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Dorel Marius Necsoiu et al.
Serial Number: 10/725,249
Date Filed: December 1, 2003
Examiner: Monica M. Pyo
Group Art: 2161
Confirmation No.: 1933
Title: **INFORMATION SHARING SYSTEM FOR
GEOGRAPHICAL DATA**

Honorable Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

DECLARATION OF DOREL MARIUS NECSOIU
SUBMITTED PURSUANT TO 37 C.F.R. § 1.131

I, Dorel Marius Necsoiu, hereby declare and state that:

1. I am a co-inventor of the subject matter and claims of the above-referenced patent application entitled *Information Sharing System for Geographic Data*, filed on December 1, 2003 (the "Application"), and having a priority date of January 13, 2003.

2. The Examiner has rejected Claims 1-14 under 35 U.S.C. § 103(a) in an Office Action mailed June 7, 2006. The rejection was based on Publication "Metadata and GIS: An ESRI White Paper", published on October 2002 (hereafter ESRI).

3. The invention that is the subject of the Claims 1-14 and newly added Claim 15 was both conceived and reduced to practice before the publication date of ESRI.

4. Such conception and reduction to practice is evidenced by the Invention Disclosure (including the Description) attached as Exhibit A. I signed the cover page of the Invention

Disclosure on August 15, 2002, after the Description (pages 1- 8) was completed. The Invention Disclosure fully describes the subject matter of the claims of the above-referenced patent application.


5. The Invention Disclosure was duly submitted to the Legal Department of Southwest Research Institute (SwRI), as evidenced by the notation "Date Received 08/15/2002" at the top of the form. The disclosure was signed by two witnesses, my co-inventor, Brandi Winfrey, and myself. It was duly received by SwRI legal personnel and assigned an internal invention disclosure number, which indicates that the receiving legal personnel independently verified the date of receipt. These events were all in accordance with standard procedure in place at SwRI for invention disclosure.

6. The conception date redacted from Item 4 of the cover page of the Invention Disclosure is prior to all other dates on the Invention Disclosure, and in particular, prior to the filing date of ESRI.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. Further, I declare that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the Application or any patent issuing thereon.

Date:

09/28/06


Dorel Marius Necsoiu

INVENTION DISCLOSURE*

1. Title: Olympus Data and Information Sharing System (Olympus DISS) Docket No. 2999
 Date Rec'd 08/15/2002
2. Object: Olympus DISS is an intranet web-based geographical data and information sharing system that allows access to data at its source. Olympus uses established data standards, provides a flexible mechanism to build applications upon, and supports output of geographic data in multiple and clear ways.

3. Name of inventor(s) (typed): Dorel Marius Necsoiu (designer), Brandi Winfrey (web page developer)
4. Date first constructed or formulated (if applicable): _____
5. Previous or planned publication or public disclosure: U.S. Nuclear Regulatory Commission, Internal Meeting, Rockville, Maryland, August 8, 2001
OLYMPUS—A Readily Implemented Geographic Data and Information Sharing System

Title

EOS (to be presented at 2002 Annual Fall Meeting, December 2002)

Name of Publication

Vol.

Issue

Page(s)

Date

6. INVENTOR(S): (I) (We), the undersigned, certify that I/(We) first conceived the within invention on 6/26/2002 and that it is fully described in the attached disclosure on pages numbered consecutively 1 through 8
- Signature in full [Signature] Date 8/15/02
- Signature in full [Signature] Date 8/15/02
- Signature in full _____ Date _____

7. WITNESSES: We, the undersigned, certify that the invention described in the attached disclosure was explained to us and that we understand the same.

Signature in full [Signature] Date 08/05/02

Signature in full [Signature] Date 08/15/2002

FOR DEPARTMENT DIRECTOR ONLY

8. ☐ The described invention *was not* conceived or first reduced to practice as the result of work on a sponsored research project.
- ☒ The described invention *was* conceived or first reduced to practice as the result of work on a sponsored research project.

Project No. 20.01402.471 Contract No. NRC-02-97-009

Sponsor: NRC

9. Summary recommendation to Patent Committee: File provisional patent.

[Signature]
 Department Director

Date 8/15/2002

*(See Instructions on Reverse)

INVENTION DISCLOSURE DESCRIPTION

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Olympus Data and Information Sharing System™ (also known as Olympus DISS™ and Olympus™) is an intranet web-based geographical data and information sharing system that allows access to data at its source. Olympus™ uses established data standards to provide a flexible mechanism to build applications upon and outputs geographic data in multiple and clear ways.

The system software is centralized, using several software components (Figure 1):

- a Commercial Off the Shelf (COTS) software component, ArcCatalog, produced by ESRI, Inc. (www.esri.com);
- two public domain packages, MP and Isite information system, produced by USGS (www.usgs.gov) and CNIDR (www.cnidr.org), respectively;
- one public domain GIS visualization software, Arc Explorer, produced by ESRI, Inc.;
- an in-house software component, Harvester, produced by CNWRA.

The search and retrieval mechanism is querying a metadata database, having each record associated with a specific geographic dataset. Olympus™ can ingest metadata associated with a variety of geographic datasets in binary formats, including but not limited to ESRI GRID, ERDAS IMAGINE, TIFF, MrSID, JPEG, BIL, BIP, BSQ, Windows Bitmap, GIF, ERDAS 7.5 LAN, ERDAS 7.5 GIS, ER Mapper, ERDAS Raw, ESRI GRID Stack File, DTED Level 1&2, ADRG Image, ADRG Overview, ADRG Legend, PNG, NTIF National Imagery Transfer Format, CIB, CADRG or CIB Frame. Data operator(s) make their data and metadata available to Olympus™ by placing it in a designated repository area. Periodically the Olympus™ system harvests metadata and automatically builds an index and a relational database with metadata information.

Olympus™ provides Spatial (Geographic), Keyword, and Temporal search and retrieval capability for an in-house repository of geographic metadata. It does this through a web-based graphical user interface. This user interface consists of a login page (Figure 2), search page (Figure 3), result page (Figure 4), and metadata pages (Figure 5).

The three options under search page - Spatial, Keyword, and Temporal - may be selected independently or in conjunction with each other to better define the user's search. If an error has been made in the selection process, the user can Reset the page back to its original default values and begin selecting again. After making all of the desired selections, the user has the option to set the maximum number of responses to view on the result page before finally submitting the query.

The result page (Figure 4) lists the term(s) queried for, the number of matching records found, the number of records currently being viewed, and the titles and links to metadata describing the available data. From this page, the user can go to the metadata page for each geo-dataset (Figure 5). Each metadata page provides information of how to download data. For a quick visualization, a version of the original data is provided in a format compatible with Arc Explorer, and ESRI GIS free viewer.

The ArcCatalog component of the Olympus™ system allows users to look for the map they want to print, draw a coverage or page using the values in a table and determine the coordinate system of the geographic data. ArcCatalog provides the metadata editor that is used to document any new added set of geographic data. The Catalog will fill in as much information as it can using the data properties, however the user will need to fill certain descriptive data in a few specific fields such as the dataset abstract, purpose, point of contact or calendar date. Inherent metadata, which is metadata that is delivered from the data, is generated automatically.

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Hardware and Software Requirements

- Target platform(s):

The system was developed and runs on Silicon Graphics workstations. The Graphical User Interface was developed on Windows and can be run on any platform with a web browser (IE) application available.

- Operating System(s):

Olympus™ currently runs on SGI Irix, but can be ported easily to other platforms such as NT and Linux.

- Programming language(s):

Java, JavaScript, HTML, VB and Perl

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Olympus DISS Modules

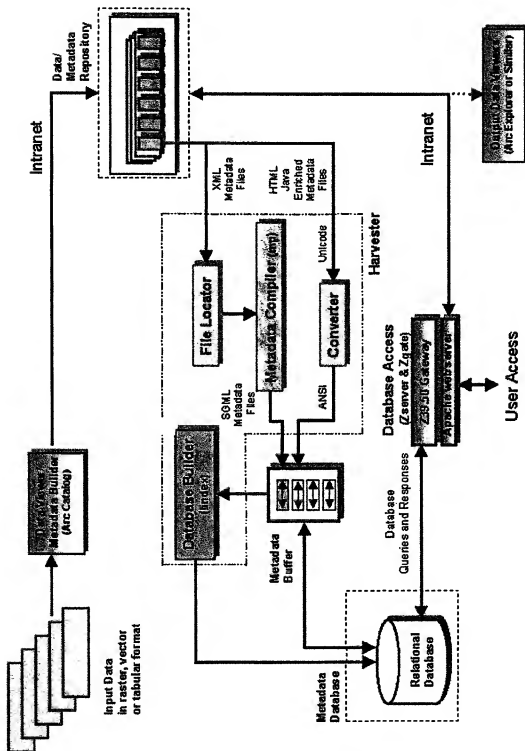


Figure 1 Olympus DISS™ – System Components and Data Flow

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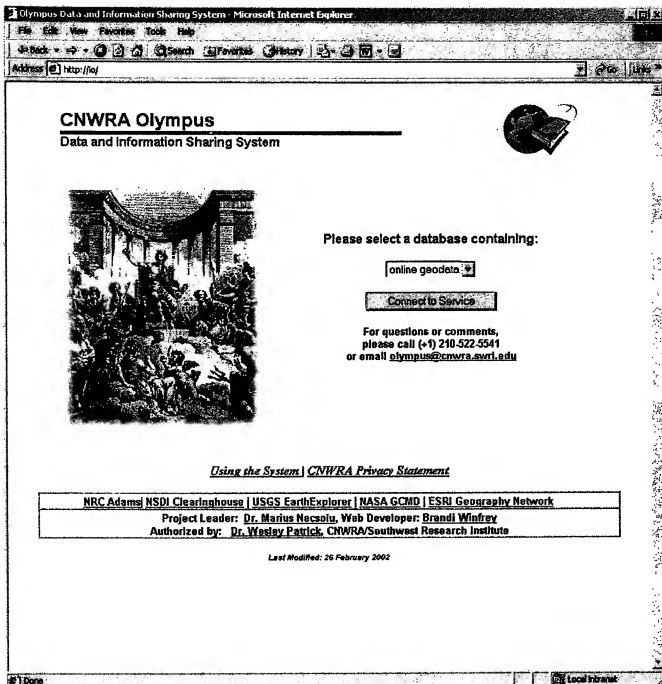



Figure 2 User Interface - Main Page

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Olympus Search Form - Online Geodata

Spatial Search



52.0 W
129.0 W
65.0 W
22.0 W

Zoom In Zoom Out

Set Map:

Select State:

Region:

Tool Type:

Tool Color:

☐ Enable ☒ Disable [Spatial Search help](#)

Keyword Search

Field	Operator	Text Input
Full Text	contains	Yucca Mountain

Data Status

☒ Don't Select Data Status

☐ Select Data Status

Data are:

[Keyword Search help](#)

Temporal Search

☐ Time Period is the single date before 2002 Aug 15

☐ Time Period is the range during or after 2002 Jan 1 through 2002 Aug 15

☐ No Date Search

[Temporal Range help](#)

Maximum Number of Responses to View:

Olympus v1.00
Last updated: 01/25/02
Copyright © SWRI, Center for Nuclear Waste Regulatory Analyses, 2002.

Figure 3 User Interface - Search Form

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Search Olympus for Yucca Mountain and [1,1035,2,3,4,6,5,100] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites History

Address: http://ncr-bwrgate

Search Results

Term(s): Yucca Mountain
315 records matched your query
Records 1 through 10 of 315 returned.

Arc/Info coverage of Yucca Mountain Area Bar and Ball Fault Symbols
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Area Volcanic Dikes
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Area Geologic Fault Symbols
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Area Geologic Faults
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Area Geologic Units
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Nevada Test Site Geologic Faults
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Geology of Nevada Test Site
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Nevada Test Site Geologic Lineaments
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Potentiometric Surface
[More on this record](#) - [Parseable text](#)

Arc/Info coverage of Yucca Mountain Fault Names
[More on this record](#) - [Parseable text](#)

[Show More Records](#)

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Figure 4 User Interface – Results Page

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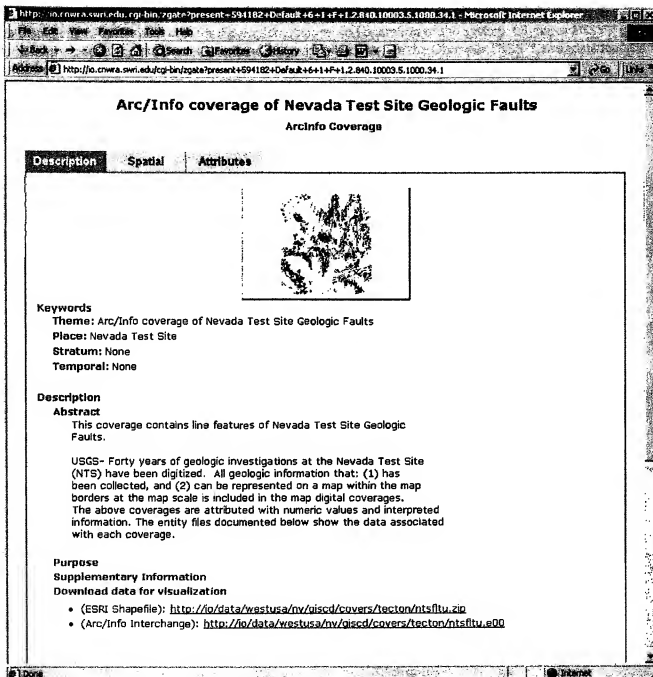


Figure 5 User Interface – GIS Metadata/Download Page